

L 33717-66

ACC NR: AP6025150

SOURCE CODE: RU/0012/65/061/004/0543/0548

AUTHOR: Marinescu, B. (Doctor; Colonel); Gheorghiu, Gh. (Doctor; Colonel);
Mihalache, Gh. (Doctor; Lieutenant colonel)

ORG: none

TITLE: Clinical forms of essential arterial hypertension 22

SOURCE: Revista sanitara militara, v. 61, no. 4, 1965, 543-548

TOPIC TAGS: cardiovascular disease, blood pressure

ABSTRACT: The authors classify arterial hypertension from the etiological, evolutionary and symptomatological points of view, and briefly discuss each category under these aspects. Special attention is devoted to malignant and benign arterial hypertension, which are broken down into several stages each. [JPRS: 33,500]

SUBM DATE: 06 / SUBM DATE: 10Mar65 / ORIG REF: 005

Card 1/1-10

ROMANIA

ZAMFIR, C., Maj-Gen, Dr, MARINESCU, B., Dr Emeritus, Col, and TURCU, E., Lt-Col, Dr. Work performed at the Section I of Internal Diseases of the Central Military Hospital (Sectia I Boli Interne din Spitalul Militar Central).

"Considerations on the Pathogenesis of Atrio-Ventricular and Intraventricular Conductive Disturbances."

Bucharest, Revista Sanitara Militara, Vol 59, No 3, May-Jun 63, pp 439-445.

Abstract: Analyzes the possibility of the existence of purely functional conduction disturbances conditioned by vagotomy and the relation between the functional and organic elements. Using 6 case studies, the authors conclude that these disturbances are always due to a lesional organic process which may be due to various causes, aggravated in some cases by the influence of local vegetative factors. The primary role in the organic-functional disturbances is played by the lesion, with the vagal hypertony being secondary. The authors deny the possibility of a purely functional disturbance in the absence of an organic substratum. The prognosis and therapeutic measures must depend on the evaluation of this substratum. Includes 15 figures and 1/1 7 references, of which 2 are Western.

ZAMFIR, C., dr.; MARINESCU, B., dr.; BITA, A., dr.

Contributions to the etiopathogenesis and therapy of cardiac
erethism. Med. intern., Bucur. 11 no.5:699-710 '60.

1. Lucrare efectuata in Sectia I medicala a Spitalului militar
central, Bucuresti.

(TACHYCARDIA, etiology)

(HYPERTHYROIDISM, complications)

(MYOCARDITIS, complications)

(NERVOUS SYSTEM diseases)

ZAMFIR, C., Dr.; GURAU, C., dr.; TURCU, E., dr.; MARINESCU, B., dr.

Congenital ectasias of the aorta. Med. int., Bucur. 8 no.3:
427-431 July 56.

(AORTA, abnormalities

ectasia, case reports)

(CARDIOVASCULAR DEFECTS, CONGENITAL, case reports

ectasia of aorta)

MARINESCU, B.

ZAMFIR, C.; TURCU, E.; GIOBANU, V.; MARINESCU, B.

Study of sodium salicylate therapy of rheumatic pericarditis, myopericarditis and pancarditis. Probl. reumat., Bucur. 4:91-114 1956.

(RHEUMATIC HEART DISEASE, therapy
sodium salicylate, results in pericarditis &
pancarditis)
(SODIUM SALICYLATE, ther. use
rheum. pericarditis & pancarditis, results)
(PERICARDITIS, therapy
sodium salicylate in rheum. pericarditis)

MARINESCU, B.

ZAMFIR, C.; MARINESCU, B.; CIOBANU, V.; TURCU, E.; GHEORGHIU, GH.; ZEITER, E.

Penicillin therapy of endocarditis lenta. Probl. card., Bucur.
2:61-96 1956.

(ENDOCARDITIS, SUBACUTE BACTERIAL, therapy
penicillin)

(PENICILLIN, ther. use
endocarditis, subacute bact.)

ZAMFIR, C.; TURCU, E.; MARINESCU, B.; CIOBANU, V.; DOGENAU, V.

Study of chloremia and chloruria in specific cardio-articular rheumatism. Probl. reumat., Bucur. 3:225-238 1955.

(RHEUMATIC FEVER, metabolism in
chlorides, determ. in blood & urine.)

(CHLORIDES, metabolism
in rheum. fever & rheum. heart dis.)

(RHEUMATIC HEART DISEASE, metabolism in
chlorides, determ. in blood & urine.)

SGRUMALA, Mihail, ing.; CIUCA, Cornel, ing.; MARINESCU, Alexandru, ing.

Heat straightening of the deformations of ship hulls. Constr
mas 16 no.9:501-508 S '64.

MARINESCU, Anton, ing.; MARIN, Alexandru

Installations of centralization and remote control in
the Pascani railway complex. Rev cailor fer 12 no. 1:
30-36 Ja '64.

MARINESCU, A. [Marinescu, A.]

Effect of controls on helicopter elastic blades. Rev mec
appl 9 no. 3:695-710 '64.

MARINESCU, Al.

Helicopter stability. Pt. 3. Rev mec appl 9 no. 1:191-212
'64.

E 11691-66 TT/AT

ACC NR: AP6031209

SOURCE CODE: - RU/0004/65/000/004/0139/0150

AUTHOR: Costina, Dorin (Engineer; Craiova); Marinescu, Andrei (Engineer; Craiova)

ORG: High-Tension Laboratory, "Electroputere" Works, Craiova (Laboratorul de inalta tensiune Uzinele "Electroputere")

TITLE: Synchronizing devices for voltage surge generators. Calculation and construction

SOURCE: Electrotehnica, no. 4, 1965, 139-150

TOPIC TAGS: electric generator, electric engineering

ABSTRACT: A discussion of two systems for the synchronization of high-voltage surge generators elaborated by the high-tension laboratory of the "Electroputere" Works. The calculations, design and operation of the systems are presented. Orig. art. has: 23 figures and 8 formulas. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 09 / SUBM DATE: 15Oct64 / ORIG REF: 005 / SOV REF: 004
OTH REF: 012

Card 1/1 af

UDC: 621.317.333.82.072.9.001.24.+002.2

0918 2642

RUMANIA

FLESCHEIN, H., Dr, Col, MARINESCU, A., Dr, Lt-Col, ROMAN, V., Dr, Maj, and VASILE, Al., Dr, Cpt [affiliation not given]

"Considerations on the Current Treatment of Recurrent Scapulo-Humeral Dislocations in the Military Environment."

Bucharest, Revista Sanitara Militara, Vol 62, No 2, Mar-Apr 66, pp 221-224.

Abstract: Observations based on 15 cases of recurring dislocations treated surgically as follows: 9 by the Von Wahl operation (one recurred); 3 by the Wilmoth-Lenormant operation (one recurred); 2 by the Stavrache modification of the Bankart operation (one recurred), and one by the original Bankart operation (good results). Special emphasis is devoted to a description of the Bankart procedure, which the authors find preferable to the other methods and plan to use more frequently in the future.

Includes 3 references, of which one German and 2 Rumanian.

L 5271-66 ARG/EWT(d)/FED/FBO/FA/EWP(c)/FA(h)/EWP(h)/FCS(k)/ETC(m) WF

ACC NR: AP5025354

RU/0019/65/010/003/0753/0772
531:629.136.3

AUTHOR: Marinescu, Al. *11.5*

TITLE: Minimum rise time of rockets *2.4.5*

SOURCE: Revue Roumaine des sciences technique. Serie de mecanique applique, v. 10, no. 3, 1965, 753-772

TOPIC TAGS: rocket flight, rocket technology, acceleration, iteration, mathematic method

ABSTRACT: A unitary iteration method is being developed for the study of the minimum time of ascension of rockets. Using the principles of variational calculus, the author deduces equations, the solutions of which describe the variations of the different characteristic parameters related to the minimum rise time. The article covers single-stage rockets and those containing n stages. The single-stage case is applied to an illustrative example of a single-stage rocket climbing from 1000 m to an altitude of 15,000 m in a minimum interval of time. Orig. art. has: 56 formulas and 4 figures.

ASSOCIATION: Institut de Mecanique des Fluides de l'Academie de la Republique Populaire Roumaine (Institute of Fluid Mechanics, Academy of the Romanian People's Republic) *11.5*

SUBMITTED: 30Nov64

ENCL: 00

SUB CODE: SV, MA

NO REF SOV: 000

OTHER: 002

Card 1/1 *BC*

09010607

L 64931-65 EMP(k)/EMP(a)/EMA(c)/EWP(b)/T/EMA(d)/ENP(t) MJW/JD/HW

ACCESSION NR: AP5023454

RU/0018/64/000/009/0501/0508

AUTHOR: Sgrumala, Mihail (Engineer); Ciuca, Cornel (Engineer); Marinescu, Alexandru (Engineer)

TITLE: Hot straightening of deformations of ship hulls. The influence of heating on the characteristics of steel O9G2

SOURCE: Constructia de masini, no. 9, 1964, 501-508

TOPIC TAGS: steel, shipbuilding engineering, metal heat treatment

ABSTRACT: Authors' English summary modified: In order to rectify deformities in ship hulls made of steel O9G2, the authors propose the use of linear heating of the covering over the skeleton of the ships. The method was used on the 3,250 to 4,500 ton dead-weight cargo ships and 3,000 ton lumber-carrying ships built at the Galati Naval Yards. Orig. Art. Incl.: 16 figures, 5 tables, and 1 graph.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: GO, MM

NR REF SOV: 004

OTHER: 006

JPRS

1/1

DAN, O., dr.; ANDREESCU, C., dr.; MARINESCU, A., dr.; FUCHITA, Marioara, dr.

Filling materials for root carals. Stomatologia (Bucur) 12
no.2:97-102 Mr-Apr'65.

1. Lucrare efectuata la Clinica de stomatologie terapeutica,
I.M.F., Bucuresti (seful clinicii: prof. A. Nass).

MARINESCU, Al.; GUTA, C.

Forced vibrations of rockets with discontinuous disturbing charges. Bul Inst Politeh 26 no.3:127-136 My-Je '64.

1. Chair of Aviation, Polytechnic Institute, Bucharest.

L 41674-65

ACCESSION NR: AP5008772

given in tabular form and compared with theoretical data. The results of the experimental investigation of the boundary layer on walls are presented and the variation of the velocity across the boundary layer is given in a graph. Orig. art. has: 33 figures and 12 tables. [AB]

ASSOCIATION: Institutul de mecanica aplicata al Academiei R.P.R.
(Institute of Applied Mechanics of the Academy, R. P. R.)

SUBMITTED: 10Aug64

ENCL: 02

SUB CODE: ME

NO REF SOV: 000

OTHER: 005

ATD PRESS: 3233

Card 2/4

L 41674-65 EWT(1)/EWP(m)/EWG(v)/TCS(k)/EWA(1) Pd-1/Pe-5/Pi-4
 ACCESSION NR: AP5008772 R/0008/64/017/006/1635/1661

AUTHOR: Marinescu, Al.

TITLE: The supersonic wind tunnel with four compressors of the
 Institute of Applied Mechanics of the Rumanian Academy of Sciences

SOURCE: Studii si cercetari de mecanica aplicata, v. 17, no. 6,
 1964, 1635-1661

TOPIC TAGS: wind tunnel, pressure distribution, airfoil, boundary
 layer, supersonic flow

ABSTRACT: The supersonic wind tunnel with four compressors belonging
 to the Institute of Applied Mechanics of the Rumanian Academy of
 Sciences is described in detail (see Figs. 1 and 2 of the Enclosure).
 Various photographs of different sections are given. The maximum
 Mach number attainable is 3 in the 150 x 160 mm test section, with
 the compressors working in series-parallel. Experimental data on the
 pressure distribution along the walls, on the flow structure and its
 direction are given. The experimental values of the pressure coef-
 ficient for various airfoils at different angles of incidence are

Card 1/4

NICOLAU, A.; MARINESCU, A.; SECAREANU, I.; LICEA, I.

Thermal photoelectric effect in semiconductors. Studii cerc fiz
16 no.9:1117-1120 '64.

1. Faculty of Physics, Bucharest University.

MARINESCU, A.I.

Forced vibrations of rockets with harmonious perturbable loadings.
Studii cerc mec apl 16 [i.e. 15] no.3:745-757 '64.

1. Submitted December 22, 1964.

MARINESCU, AL.

Approximate analysis of forced vibrations of rockets. Rev. rev. 400
9 no. 5:1115-1134 1964.

1. Institute of Applied Mechanics, Rumanian Academy.

ACCESSION NR: AP4042093

R/0008/64/015/002/0441/0460

AUTHOR: Marinescu, Al.

TITLE: Optimum ascent of one-stage rockets

SOURCE: Studii si cercetari de mecanica aplicata, v. 15, no. 2, 1964, 441-460

TOPIC TAGS: ascent time, variational calculus, space trajectory, horizontal speed

ABSTRACT: The paper discusses the problem of optimum ascent of one-stage rockets from the viewpoint of minimum ascent time as well as from that of minimum fuel consumption in the general case of space trajectory travel. For both aspects of the problem (minimum ascent time and minimum fuel consumption), by using variational calculus methods, the author deduces differential equations whose solutions give the laws of variation of the different parameters that result in optimum ascent. Orig. art. has: 23 equations and 2 figures.

ASSOCIATION: None

SUBMITTED: 18Sep63

ENCL: 00

SUB CODE: SV, MA

NO REF SOV: 000

OTHER: 004

Card 1/1

L 19704-65

ACCESSION NR: AP4049974

determining critical (resonance) frequencies and an illustrative numerical example. The second section deals with the case of random forces and expressions are derived for the probabilities of exceeding the limits imposed on rocket deflections and stresses. The third section is concerned with discontinuous forces. It is assumed here that the deflections resulting from such forces may be expressed by functions that have a Laplace transform. Forced vibration equations are analyzed for the general case and a simplified case in which the rocket is considered as a uniform beam. Orig. art. has: 9 figures.

ASSOCIATION: Institute of Applied Mechanics, Academy of Sciences,
RPR

SUBMITTED: 00

ENCL: 00

SUB CODE: AS, ME

NO REF SOV: 000

OTHER: 011

ACCESSION NR: AP4017882

$$M \frac{dV}{dt} = T \cos \alpha - R - Mg \sin \theta,$$

$$MV \frac{d\theta}{dt} = P - Mg \cos \theta + T \sin \alpha.$$

and finds a system of differential equations of extrema. It gives in a first approximation the laws of change of velocity, of the angle of inclination of the tangent to the trajectory and the other parameters making the ascent time function minimum. Orig. art. has: 1 figure, 15 formulas.

ASSOCIATION: none

SUBMITTED: 30Apr63

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: AS

NO REF SOV: 001

OTHER: 005

Card 2/2

00513R00103231000

L 19704-65 ARG/EWT(d)/FBD/FBO/EWT(m)/EMP(w)/EWG(b)-2/FCS/EWP(c)/EPH/EWP(h)/TCS(k)
Pn-4/PS-h/Pw-4 AEDC(s)/ASD(f)-3 WH/EM R/0019/64/009/005/1115/1134
ACCESSION NR: AP4049974

AUTHOR: Marinescu, Al.

TITLE: Approximate analysis of forced vibrations of rockets

SOURCE: Revue Roumaine des sciences techniques. Serie de mecanique appliquee, v. 9, no. 5, 1964, 1115-1134

TOPIC TAGS: approximate analysis, rocket vibration, forced vibration, variable mass beam, variable cross section beam, simple beam

ABSTRACT: This paper deals with the problem of forced vibrations of a rocket considered as a beam of variable stiffness and mass subjected to the action of three types of externally applied forces: harmonic, discontinuous, and random. The mathematical treatment also takes account of the effect of inertia of rotation, the effect of shear, the effect of aerodynamic and internal damping, and the effect of axial and restoring forces. In the case of internal damping, the Voight model of internal damping was replaced by another model. The analysis on the case of harmonic forces presents expressions for

ACCESSION NR: AP4017882

R/0008/63/014/006/1465/1477

AUTHOR: Marinescu, Al.

TITLE: On the problem of the ascent of rockets in minimum time

SOURCE: Studii si cercetari de mecanica aplicata, v. 14, no. 6, 1963, 1465-1477

TOPIC TAGS: rocket ascent, acceleration, rocket takeoff, minimum takeoff time

ABSTRACT: The problem of optimum ascent with respect to time has recently become the subject of much research both for high-velocity jet planes considered as bodies of invariable mass and for rockets considered as bodies of variable mass. The paper, following closely Al. Marinescu, "On the optimum ascent of ground-to-air rockets", Revista transporturilor, 11, 1962, examines "in a complete form" the problem of ascent in minimum time of a rocket considered as a body with variable mass, adopting the altitude as an independent variable. Under the hypothesis of a plane trajectory, it sets up the equations of motion in the direction of the tangent to the trajectory and normal:

Card 1/2

MARINESCU, A1.

Considerations on the dynamic response of the rocket structure
during disturbed flight. Studii cerc mec apl 14 no.3:559-572
'63.

MARINESCU, Al.

Helicopter stability. Pt. 2. Rev mec appl 8 no. 6:
1057-1101 '63.

MARINESCU, Al.

Helicopter stability. Pt.1. Rev mac appl 8 no.5:779-815
'63.

Vibrations of jet-driven helicopter rotor blades

R/008/62/013/006/007/008
A065/A126

vibrations, the generalized force corresponding to the aerodynamical force distributed along the blade, the generalized forces due to concentrated forces, and the generalized force corresponding to the aerodynamical force which results from the deformation of the blade. Included are the solutions of the forced vibration equation and of the equation of the resonance angular speed. The given formulae also generalize the case of rotor blades with mechanical drive. There are 3 figures. ✓

SUBMITTED: August 1, 1962

Card 2/2

R/008/62/013/006/007/008
A065/A126

AUTHOR: Marinescu, Al.

TITLE: Vibrations of jet-driven helicopter rotor blades

PERIODICAL: Studii și cercetări de mecanică aplicată, v. 13, no. 6, 1962, 1,601
- 1,613

TEXT: The vibrations of various types of jet-driven helicopter rotor blades are analyzed, i.e., purely articulated blades, blades fastened to the shaft by a cardan suspension, and cantilever blades; considering the fact that the blade has a torsion-free trapezoidal shape, and taking the compressibility of the air in the Prandtl Glauert approximation, i.e., $M \leq 0.7$, as well as the aerodynamical damping introduced by the deformation of the blade, into consideration. It is also admitted that the traction of the air-jet nozzle coincides with the axis of the nozzle hull and with the symmetry axis of the blade profile. The author first proves that in case of an air-jet nozzle of a mass M , located at the tip of the blade, this mass modifies the natural frequency of the blade, as against the case if that mass would not exist. He then determines the forced

Card 1/2

MARINESCU, Al., ing.

On the optimum climbing of ground-to-air rockets. Rev
transport 9 no. 11:485-489 N '62.

MARINESCU, Al, ing.

Dynamic response of helicopter rotor blades. Rev transport 9 no.8:
356-358 Ag '62.

MARINESCU, Al., ing.

Aspects of the utilization of transportation planes
under optimum conditions. Rev transport 9 no. 6:242-245
Je '62.

STROESCU, I. [deceased]; MARINESCU, A.

Experimental studies on the subsonic wind tunnel of the Traian Vuia
Institute of Applied Mechanics, Rumanian Academy. Studii cerc mec
apl 12 no.4:909-922 '61.

(Wind tunnels)

MARINESCU, Al., ing.

Ballistic vehicles and their flight. Rev transport 8 no.10:443-446 '61.

23655

The dynamic stability of convertiplanes

R/008/60/000/004/002/018
A125/A126

located at equal distances from the longitudinal axis of the aircraft; and, c) The propeller discs are approximately parallel with the Oxy planes. He establishes the equations of perturbed longitudinal and lateral movements and gives the conditions of the dynamic stability. There are 2 figures and 3 Soviet-bloc references.

SUBMITTED: December 19, 1959

Card 2/2

10 9010

23655

R/008/60/000/004/002/018
A125/A126

AUTHOR: Marinescu, Al.

TITLE: The dynamic stability of convertiplanes in frequent flight
evolutions

PERIODICAL: Studii și Cercetări de Mecanică Aplicată, no. 4, 1960, 835 - 845

TEXT: The paper contains a general study on the dynamic stability of convertiplanes in hovering and vertical flight. The author refers to two types of convertiplanes: with tilting wings and with tilting propellers. The problem of the dynamic stability of convertiplanes has already been studied by K. Hohenemser (Records of the Congress on Applied Mechanics, Brussels, 1956) and the papers (Ref. 1: Al. Marinescu, Teoria elicopterului [Theories of Helicopterflight], Ed. Acad. R.P.R., București, 1960; Ref. 2: - Asupra stabilității dinamice a elicopterului cu rotoare coaxiale contrarotative, Studii și cercetări de mecanică aplicată, VII, 1, 1956.) have supplied many useful elements. The calculations have been performed on the basis of the following hypotheses: a) Both propellers are identical in shape and are counterrotating with the same speed; b) The propellers are

Card 1/2

84649

10.6110

R/008/60/000/002/002/007
A125/A026

AUTHOR: Marinescu, Al.

TITLE: Observations Regarding the Flow Around the Bodies of Revolution

PERIODICAL: Studii și Cercetări de Mecanică Aplicată, 1960, No. 2, pp. 339-343 ²⁰

TEXT: The problem of the flow around the bodies of revolution at high subsonic speed was treated for the first time by the authors of (Ref. 1 and 2). The equations of these flows are non-linear and the determination of the respective speeds of the pressures around the bodies is very difficult. Subject article is based on the hypothesis that the disturbance speed has a major function in the distribution of the pressures on the body. The author determines this speed and calculates the ratio $\frac{P_{static}}{P_{total}}$ as a function of the disturbance speed. ✓

He compares the calculated ratio with the experimental results of Wright and Ward (Ref. 5). There are 3 figures and 5 references: 4 English and 1 Rumanian.

SUBMITTED: December 12, 1959

Card 1/1

RUMANIA

FLESCHEIN, D., Dr, Col, and MARINESCU, A., Dr, Lt-Col [affiliation not given]

"Considerations on Abdominal Wounds Caused by Firearms in Connection with 15 Cases Treated."

Bucharest, Revista Sanitara Militara, Vol 62, No 5, Sep-Oct 66, pp 883-885.

Abstract: A brief discussion of 15 cases of penetrating abdominal wounds caused by firearms, resulting in injuries of various types. The diversity of damage which may be caused by such wounds is stressed. In the 15 cases reported, a mortality rate of 25.9 percent resulted, attesting to the seriousness of such wounds.

Includes one Rumanian and one British reference. --
Manuscript submitted 12 April 1966.

1/1

- 60 -

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque of Single-Rotor Helicopters

$$\frac{\varphi_2}{a_1^2}, \frac{\varphi_3}{a_1^2}, \text{ or } \frac{\varphi_2}{a_2^2}, \frac{\varphi_3}{a_2^2}$$

are not cancelled, the first field of instability is not discussed.
There are: 1 set of diagrams and 3 references, 1 of which is French,
1 Rumanian and 1 Russian.

SUBMITTED: July 11, 1958

4

Card 7/7

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque of Single-Rotor Helicopters

with the effective determination of the amplitude, obtaining the relation:

$$A^2 = \frac{4 \varphi_2}{\omega^2 M_e \varphi_3^2} \left(1 + \frac{3}{2 \varphi_2} M_e \varphi_3 a \omega^2 \right) - \frac{2 \varphi_1 + Y^2(1) M_e}{2 M_e \varphi_3^2} \quad (33).$$

By extracting the radical from this relation, he obtains the amplitude as a completely defined function with the geometrical-physical characteristics of the antitorque system. The maximum deviation of the antitorque frame can now be obtained by multiplying the amplitude with the $Y(x)$ function. The arbitrary constant disappears by this operation, since it appears also in the denominator in the expression of A , remaining only the ratio between a_1 and a_2 , which is removed from the homogeneous system (2)). As far the expressions:

✓

Card 6/7

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque of Single-Rotor Helicopters

then to its examination. The resonance phenomenon, which leads to an indiscernible increase of the motion amplitude of the tail rotors system, is of greatest importance for the practical requirements. The nonlinear terms of the equation (11) are of odd power, for which the solution of the linear problem [Ref 3]:

$$\zeta(t) = \sum \left(\alpha_n \sin \frac{n \omega t}{2} + \beta_n \cos \frac{n \omega t}{2} \right), \quad (22)$$

will be considered in the nonlinear case as:

$$\zeta(t) = \sum_{n=1,3,5,\dots}^{\infty} \left(\alpha_n \sin \frac{n \omega t}{2} + \beta_n \cos \frac{n \omega t}{2} \right) \quad (23).$$

This solution is valid only at the boundaries of the odd fields of instability. The main resonance phenomenon can be examined alone by the series:

$$\zeta(t) = \alpha \sin \frac{\omega t}{2} + \beta \cos \frac{\omega t}{2} \quad (24).$$

Due to this expression, the φ function:

$$\varphi(\zeta, \dot{\zeta}, \ddot{\zeta}) = 2\pi [\zeta^2, \dot{\zeta} + \zeta \dot{\zeta}^2] \quad (25)$$

is periodic and can be developed into a Fourier series. The author then establishes the expression $A^2 = \alpha^2 + \beta^2$ for the amplitude and begins

Card 5/7

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque of Single-Rotor Helicopters

$$I_x \sim 0.4 \delta_m D_o^3 \left(1 - \frac{x}{l}\right)^3 \quad (12)$$

The function $Y(x)$ which has to match the conditions (13) is expressed by:

$$Y(x) = a_1 x^2 + a_2 x^3 \quad (14)$$

The section in a point x of the frame is

$$A_x = \pi D_o \delta_{im} \left(1 - \frac{x}{l}\right) + S, \quad (15)$$

where $S = \sum s_i$, s_i being the section of a ledge and δ_{im} the thickness of the covering. Following approximately the procedure of Ritz [Ref 2] on the base of the condition:

$$\frac{\partial}{\partial a_n} \left[\frac{\int_0^1 I_x \left[\frac{d^2 Y}{dx^2} \right]^2 dx}{\int_0^1 A_x Y^2(x) dx} \right] = 0, \quad (17)$$

Card 4/7

the author completely defines the differential equation (11) and proceeds

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque of Single-Rotor Helicopters

$$T = \dot{\zeta}^2 \left[\varphi_1 + 2M_e \varphi_3^2 \zeta^2 + \frac{Y^2(1)}{2} M_e \right] + \dot{\zeta} 2M_e \varphi_3 a \omega \zeta \sin \omega t + \frac{1}{2} M_e a^2 \omega^2, \quad (8)$$

$$V = \zeta^2 \left(\varphi_2 + \frac{1}{2} M_e \omega^2 a \varphi_3 \cos \omega t \right). \quad (9)$$

Introducing these two expressions into Lagrange's equation

$$\frac{d}{dt} \left(\frac{\partial T}{\partial \dot{\zeta}} \right) - \frac{\partial T}{\partial \zeta} + \frac{\partial V}{\partial \zeta} = 0, \quad (10)$$

and performing all calculations, the following nonlinear equation of the second order is obtained for the frame motion:

$$\ddot{\zeta} + \Omega^2 [1 - 2\mu \cos \omega t] \zeta + 2\kappa [\zeta^2 \ddot{\zeta} + \zeta \dot{\zeta}^2] = 0 \quad (11)$$

For the determination of the expressions Ω^2 , μ and κ (Nr 11') it is first necessary to find the function $Y(x)$, which describes the bending shape. Generally such a frame is an orthotropic construction, assimilated to a cone (Figure 2), consisting of a covering with frames and ledges.

Notating with D_0 the average diameter of the covering annulus in a section x , the inertial moment will be:

Card 3/7

4

80413

RUM/8-59-1-4/24

On the Vibration of the Antitorque Frame of Single-Rotor Helicopters

length of frame, a = excentricity of the propeller, M_e = mass of the propeller, and ω = angular speed of the propeller. After mentioning the expressions for the flexion of the frame in a point x (Nr 1), the contraction of the blade in a section x (Nr 2), the flection and contraction at the end of the frame (Nr 3), the co-ordinates of the propeller's center of gravity will be:

$$\begin{aligned} x &= l - \Delta l + a \cos \omega t, \\ y &\approx u(1) \end{aligned} \quad (4)$$

The author then determines the values of the kinetics and potential energies of the tail rotor system:

$$T = \frac{\gamma}{2g} \int_0^1 A_x \left(\frac{\partial u}{\partial t} \right)^2 dx + \frac{1}{2} M_e (x^2 + y^2), \quad (5)$$

$$V = \frac{1}{2} \int_0^1 EI_x \left(\frac{\partial^2 u}{\partial x^2} \right)^2 dx + \frac{1}{2} \cdot M_e \cdot \omega^2 \cdot a \cdot \Delta l \cdot \cos \omega t \quad (6)$$

in which EI_x = the rigidity to flexion, γ = weight of the volume unit, and A_x the area in a section x of the frame. Considering the equation (1 and 4) and the relations of φ_1 , φ_2 , and φ_3 (Nr 7), the relations (5 and 6) become:

Card 2/7

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RUM/8-59-1-4/24

AUTHOR: Marinescu, A.TITLE: On the Vibration²⁶ of the Antitorque Frame²⁶ of Single-Rotor Helicopters⁴

PERIODICAL: Studii si Cercetări de Mecanică Aplicată, 1959, Nr 1, pp 77 - 85 (RUM)

ABSTRACT: This article deals with the vertical vibrations¹ of the antitorque frame of a single rotor helicopter, caused by the excentricity of the tail rotor. The resistance moment of the helicopter rotor⁴ is neutralized by an anti-torque tail rotor, located at a certain distance from the proper helicopter body and suspended by a frame. Usually, this frame is of monocoque construction having a nearly conical shape (Figure 1). The tail rotor is suspended by an axle which is perpendicular to the longitudinal axis of the frame (Figures 1a and b). The rotor is driven by the engine through a multisection axle connected by universal joints, which passes through the frame. Assuming that the helicopter flies to a fixed point, no aerodynamical disturbances are acting on the antitorque tail rotor. The torsion can be neglected since the tail rotor disc is located in the immediate vicinity of the frame. The author refers the system of the fixed axes xOy in such a way that the rigid fixing section of the frame will fall into the origin of the axes (Figure 2) and uses the following notations: $l =$

Card 1/7

4

MARINESCU, A.

Longitudinal dynamic stability in the horizontal flight of helicopters with tandem rotors.

P. 32 (REVISTA TRANSPORTURILOR) (Bucuresti, Rumania) Vol. 4, no. 12, Dec. 1957

30: Monthly Index of East European Accessions (MEAI) LC Vol. 7, No. 5. 1958

MARINESCU, A.

The constriction of helicopters. p.11.
(Aripile Patriei, Vol. 3, No. 1. Jan 1957, Bucuresti, Rumania)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No.8, Aug 1957. Uncl.

Marinescu, Al.

✓ O Metodă de Corectare a Stabilității
Avioanelor care Zboară pe Verticală.

Al. Marinescu, Rev. Transp., Feb., 1957,
pp. 78-80. In Romanian. Development
of a method for testing the stability of
aircraft in vertical flight.

RHA
MM

MARINESCU, A.

Dynamic stability of two frequent types of helicopters, in ascendent vertical flight and at a fixed point.

p. 617 (Academia Republicii Populare Romine. Institutul de Mecanica Aplicata, Studii Si Cercetari De Mecanica Aplicata. Vol. 7, no. 3, July/Sept. 1958. Bucuresti, Romania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

MARINESCU, A.

Experimental studies on the distribution of circulation along the span of
a straight and a sagital eliptic wing. p. 39. STUDII SI CERCETARI DE MECANICA
ALPICATA. Bucuresti.
Vol. 6, no. 1/2, Jan/June 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress,
Vol. 5, no. 11, Nov. 1956.

MARINESCU, A.

MARINESCU, A.

MARINESCU, A. Considerations on the calculation of the stability of helicopters with jet-driven rotors. p. 473.

Vol. 3, no, 12, Dec. 1956
REVISTA TRANSPORTURILOR.
TECHNOLOGY
RUMANIA

So: East European Accession, Vol. 6, No. 5, May 1957

MARINESCU, A.

R+G

Formulele Under Mixte Pentru Sisteme
Lineare Stabile. M. Marinescu.
Stud. Cerc. Mat. Univ. Cluj. Proc. Acad.
pp. 811-819. In: Romanian Journal of
Mathematics. Translation of mixed wave expressions used to
calculate (a) the response function for the

case of a known transfer function or (b)
the transfer function for the case of a given
response function for stable linear auto-
matic control systems.

CF
mgi

Stabilitatea Dinamica in Zbor Vertical
Ascendent si La Punct Fix, A Doua Tipuri.
Procedente de Elicopter. Al. Mardarescu.
Stud. Cerc. Mec. Aplic., Iute Sept., 1958,
pp. 617-660. In Romanian. Study of
the dynamic stability of conventional
type helicopters in rising vertical flight
and in flight at a fixed point.

RMA
M

MARINESCU, AL.

MARINESCU, A.I.

✓ Considerații asupra Calculului Stabilității Helicopterelor cu Rotor Antrenat Prin Jec. A.I. Marinescu, Rev. Transp., Dec. 1966, pp. 473-478. In Romanian. Analysis of the method for calculating the stability of a helicopter having a jet-propelled rotor.

Deschideți

RHA
img

MARINESCU, AL.

Asupra Stabilității Dinamice a Helicop-
terului cu Rotoare Coaxiale Contrarola-
tive. Al. Marinescu. Stud. Cerc. Mec.
Aplic. Jan-Mar., 1958, pp. 20-44. In
Romanian. Study of the stability of
helicopters having coaxial, counter-rotat-
ing rotors, assuming that the latter are
fixed elastically to the rotating shaft.

RHA
MM

MARINESCU, A.

Problem of stability of a helicopter with jet-driven rotor in flight at a fixed point. p. 299. Academia Republicii Populare Romine. Institutul de Mecanica Aplicata. STUDII SI CERCETARI DE MECANICA APLICATA. Bucuresti. Vol. 6, no. 3/4, July/Dec. 1955.

So. East European Accessions List

Vol. 5, No. 9

September, 1956

MARINESCU, A.

Study of cutaneous alterations in connection with the cancerous and irritating action of hydrocarbons used in impregnation of wood. C. Tătaru, A. Oprea, and A. Marinescu. *Comun. acad. rep. populare România* 5, 1783-7 (1964).

Cases are described in which workers in a wood-impregnation factory developed photosensitivity and spinous cellular epitheliomas (1). Mainly those workers coming into direct contact with the hydrocarbons used for impregnation were affected. The vapors attack especially the uncovered skin with the development of acne and follicular hyperkeratosis. In several cases I was observed.

Emanuel Mordlinger

MARINESCU, A.

Aerodynamics of supersonic wings. p. 30. Aripile Patriri. Bucuresti. Vol. 1, No. 8, Aug. 1955.

SOURCE: East European Accessions List (EEAL), LC. Vol. 5, No. 3, March 1956.

MARINESCU, AL.

Experimental Research into the Repartition (Distribution) of the Circulation along the Wingspread of Straight and Arrow-shaped (Sweepback) Elliptical Wings. Studii Si Cercetari De Mechanica Aplicata (Studies and Research in Applied Mechanics), #1-2:39:Jan-Jun 55

MARINESCU, A.

"Profile of the Wing Within the Rules of Supersonics", . 36, (AVIATIA
PORTIVA, Vol. 5, No. 10, October 1954, Bucharest, Rumania)

SO: Monthly List of East European Accessions (PMAL), IC, Vol. 4, No. 3,
March 1955, Uncl.

MARINESCU, A.

"Aerodynamics of Airplane Tails." P. 23. (AVIATIA SPORTIVA, Vol. 5, No. 5, May, 1954, Bucuresti, Rumania.)

SO; Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

MARINESCU, A.

"Flight Resistance of a Wing." P. 26. (AVIATIA SPORTIVA, Vol. 5, No. 4, Apr. 1954, Bucuresti, Rumania.)

SO; Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

MARINESCU, A.

"Technique of testing models of wings in an aerodynamic tunnel". p. 13.
(AVIATIA SPORTIVA, Vol. 5, No. 3, Mar. 1954, Bucuresi, Rumania)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

MARINESCU, A.

"Knowledge of the stability of airplanes is necessary for piloting".
p. 22, (AVIATIA SPORTIVA, Vol. 5, No. 2, Feb. 1954, Bucuresi, Rumania)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3,
No. 12, Dec. 1954, Uncl.

MARINESCO, AL.

2

Influenta Efectului Giroscopic al Rotorului in Stabilitatea Longitudinala a Elicopterului (Influence d l'Effect Gyroscopique du Rotor sur la Stabilite Longitudinale de l'Heli-coptere). Al. Marinescu. Rumania, Acad. Rumanian People's Rep. Inst. Appl. Mech. July Dec, 1954, pp. 323-339. In Rumanian. Motion study of the gyroscopic effects of the rotor of longitudinal stability. MS

(Clipped Abstract)

Handwritten signature

MARINESCU, A.

"Hyperbouyancy." P. 26. (AVIATIA SPORTIVA, Vol. 5, No. 1, Jan. 1954,
Bucuresti, Rumania.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 1, Jan. 1955 Uncl.

MARDNESCU, A.

"Symmetrical Flight of a Helicopter; Its Stability." P. 13. (AVIATIA SPORTIVA,
Vol. 4, No. 12, Dec. 1953, Bucuresti, Rumania.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 1, Jan. 1955 Uncl.

MARINESCU, A.

"Combustion in piston-driven airplane motors." p. 26 (Aviatia Sportiva, Vol.4 No. 8
Aug 1953, Bucuresti).

of Congress Feb 54 Uncl

MARINESCU, A.

"Aerodynamics of the airplane wing. p. 16"
Bucuresti; Rumania.

AVIATIA SPORTIVA, Vol. 4, no.2, Feb. 1953.

SO: Monthly List Of East European Accessions, L.C. Vol. 2, No. 11, Nov. 1953, Uncl.

MARINESCU, A.

"Aerodynamic profile", p. 21, (AVIATIA SPORTIVA, Vol. 4, no. 1, Jan. 1953, Bucuresti)

SO: Monthly List of East European Accession, Vol. 2, no. 8, Library of Congress,
August 1953, Uncl.

L 33714-66

ACC NR: AP6025153

SOURCE CODE: RU/0012/65/061/004/0567/0572

AUTHOR: Floschin, D. (Doctor; Colonel; Candidate of medical sciences); Marinescu, A.
(Doctor; Lieutenant colonel); Roman, V. (Doctor; Major)

ORG: none

TITLE: Treatment of arterial wounds in times of peace and under conditions of battle

SOURCE: Revista sanitara militara, v. 61, no. 4, 1965, 567-572

TOPIC TAGS: wound, circulatory system, military medicine

ABSTRACT: A survey of the various types of arterial wounds occurring in peacetime and under battle conditions. For each type of injury the discussion includes a brief literature survey, treatment advised, and a discussion of the authors' experiences, occasionally accompanied by case histories. [JPRS: 33,500]

SUB CODE: 06 / SUBM DATE: 22Jan65 / ORIG REF: 003 / OTH REF: 004

Card 1/1

L 29445-66

ACC NR: AR5023001

0

meteor activity as registered on 4.2 and 10 m waves are in basic agreement. A deduction was made regarding the applicability of the proposed installation as part of the meteor patrol service.

SUB CODE: 03/ SUBM DATE: none

Card 2/2 fV

L 29445-66 EWT(1) GW

ACC NR: AR5023001

SOURCE CODE: UR/ 0269/65/000/008/0047/0048

AUTHOR: Peregudov, F. I.; Marinenko, V. A.; Yanyushkin, V. L.

TITLE: Automatic radar station for meteor activity registry

SOURCE: Ref. zh. Astronomiya, Abs. 8.51.425

REF SOURCE: Tr. Tomskogo in-ta radioelektron. i elektron. tekhn.,
v. 3, 1964, 98-103

TOPIC TAGS: astronomic data, meteor observation , radar station

ABSTRACT: Considerations of a general character were expressed regarding the possible parameters of a meteor registry automatic radar station, whose installation on USSR territory is planned in the near future as part of the regular meteor patrol service; a block-diagram on the installation was proposed. On the basis of the proposed block-diagram, a radar station operating on a 4.2 m wave was constructed. In order to check on the accuracy of its system, several observations were made in conjunction with observations made by a station operating on a 10 m wave and giving more extensive statistical data. The results of both observations are given in a table and show that data on the

Card 1/2

UDC: 523.164.8

STOICHITA, Sandu; SAFIRESCO, Theodor; BOICESCO, Lidia; BROSTEAMU, Ernest;
STECIACI, Adrian; DEBAU, Mircea; MARINESCO, Eliza; GAVRILA, Ion;
GAVRILA, Doina

Osseous, muscular and articular lesions in scleroderma. Przegl.
derm. 52 no.3:243-249 My-Je '65.

1. Z V Kliniki Medycznej Instytutu Medyczno-Farmaceutycznego w
Bukareszcie (Kierownik: prof. dr. T. Sparchez).

ZARNEA, Liviu; SIRETEANU-TURZA, Ana; MARINESCU, A.

Therapeutic problems in gangrene of the deciduous teeth. Romanian

M Rev. no.4:83-85 O-D '60.

(DENTAL PULP diseases)

L 46759-66 FSS-2/BWT(1) GW/WR

ACC NR: ARG004334

SOURCE CODE: UR/0274/65/000/009/B030/B030

AUTHOR: Peregudov, F. I.; Marinenko, V. A.; Yanyushkin, V. L.

REF SOURCE: Tr. Tomskogo in-ta radioelektron. i elektron. tekhn., v. 3, 1964, 98-103

TITLE: An automatic radar station for recording meteoric activity

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 9B198

TOPIC TAGS: radar meteor observation, meteor tracking, meteor observation

TRANSLATION: The general arguments concerning possible parameters for an automatic radar for observing meteorites are expressed. The radar is intended for use in the regular meteor tracking service in the USSR. A block diagram is shown for the radar operating at wavelength $\lambda=4.2$ m. To test the accuracy of the system's operation, several observations were made with a radar operating at a wavelength $\lambda=10$ m; these observations produced a larger amount of statistical material. The results of the observations, shown in a table, indicate that the course of meteoric activity at $\lambda=4.2$ m on the whole coincides with that observed at $\lambda=10$ m. 1 illustration. G. S.

SUB CODE: 17,03/

SUBM DATE: none

UDC: 621.396.969:523.164

Card 1/1

GRACHEV, A., Geroy Sovetskogo Soyuz; VIGONOV, V., master planeruogo sporta
MARINENKOV, V., master parashyutnogo sporta

To instill athletic pride in our aeronautic clubs. Voen. znan.
25 no.4:17 Ap, '49. (MIRA 12:12)
(Aeronautical societies)

IVANOVA, T.V.; KLADNITSKIY, V.M.; MARINENKO, N.S., red.

[Approximate calculation of beams resting on footings
undergoing linear deformations in longitudinal-transverse
flexure] O priblizhenom raschete balok, lezhashchikh na
lineino-deformiruemom osnovanii pri prodol'no-poperechnom
izgibe; metodicheskoe posobie. Vladivostok, Dal'nevostochny
y politekhn. in-t, 1962. 4 p. (MIRA 17:4)

KOROBov, P.I.; KHLIMNIKOV, V.B.; DOMISOV, A.F.; SKOCHINSKIY, A.A.; SHEVIYAKOV, L.D.; MEL'NIKOV, M.V.; MELESHKIN, S.M.; MOSKAL'KOV, Ye.F.; POKROVSKIY, M.A.; KAPLUNOV, R.P.; BOGOLYUBOV, B.P.; ARUTYUNOV, N.B.; BOYKO, V.Ye.; BRINZA, N.M.; FEDOROV, V.F.; AGOSHEV, M.I.; BARONENKOV, A.V.; VORONIN, L.N.; IPATOV, P.M.; MAZAROV, P.P.; SLUTSKAYA, O.M.; CHIRCHENKO, M.B.; RABINOVICH, V.I.; SEMENSKIY, V.N.; TROITSKIY, A.V.; GOL'DIN, Ya.A.; DZMAPARIDZE, Ye.A.; ZHURAVLEV, S.P.; KUZNETSOV, K.K.; KALIVICH, N.A.; MARINENKO, M.P.; PANTYNOV, G.P.; NATANOV, P.P.; PERTSEV, M.A.; ROSSKIT, A.F.; RYASNOY, A.A.; SOSEDOV, O.O.; VINOGRADOV, V.S.; ZUBAREV, S.N.; SHAFARENKO, I.P.

Nikolai Nikolaevich Patrikeev; an obituary. Gor.zhur. no.6:76 Jo
'60. (MIRA 14:2)

(Patrikeev, Nikolai Nikolaevich, 1890-1960)

Work Practices of Magnitogorsk (Cont.)	442
Ch. V. Preparation of charge and the sintering process	27
Ch. VI. Production of sinter	30
1. Operation of sintering plants #2 & #3	30
2. Operation of sintering plant #1	60

AVAILABLE: Library of Congress

Card 3/3

GO/jmr

7-1-58

Work Practices of Magnitogorsk (Cont.)

442

COVERAGE: The author reviews the handling and classification of iron ores and describes in detail the processing and beneficiation of ore fines in sintering plants. There are numerous tables containing data on screen sizes, concentration by dry and wet magnetic separation, chemical composition of the charge, and the operating conditions in sintering plants. The application of automation and the economic and technological aspects of sintering are also discussed. There are no references.

TABLE OF
CONTENTS:

Ch. I. Preparation of ore	3
Ch. II. Preparation of flux	13
Ch. III. Preparation of fuel	24
Ch. IV. Return fines and flue dust	26

Card 2/3

MARINENKO, M. P.

PHASE I BOOK EXPLOITATION

442

Yakobson, Aleksandr Petrovich

Opyt raboty magnitogorskikh aglofabrik (Work Practices of
Magnitogorsk Sintering Plants) Moscow, Metallurgizdat, 1957.
72 p. 2,000 copies printed.

Ed.: Marinenko, M. P.; Ed. of Publishing House: Zinger, S. L.;
Tech. Ed.: Evenson, I. M.

PURPOSE: This pamphlet is intended for technical personnel and
skilled workers in sintering plants. It may also be
used by students of engineering colleges and technicums.
The data are based on the work practice of
Magnitogorsk sintering plants.

Card 1/3

CH

9

Uniformizing ores and concentrates in Magnitogorsk works. M. P. Marinenko and I. S. Shitov. *Gornyi Zhurnal*, 1952, No. 4, 20-22. Procedures adopted at the mines, open storage yards, and storage bins for uniformization of ore with various Fe content so as to obtain an ore of uniform Fe content in successive batches are described. M. H.

MARINENKO, M. P.

23223 Ekskavatornyye raboty na Magnitogorskom rudnike. Mekhanizatsiya
trudoyemkikh i tyazhelykh rabot, 1949, No. 7, c. 30-32

SO: LETOPIS' NO. 31, 1949

ACCESSION NR: AT4013945

15Kh1M1F and 15KhZM2FB5 steel. Increasing the manganese content from 0.58% to 1.19% decreased the critical cooling rate (minimum cooling rate without change in the free ferrite microstructure in the steel) from 2500C per hour to less than 50C per hour. This also increased the impact strength. Experiments were also done with addition of nickel (0.5-0.8% to 0.9-1.1%). Without nickel, the microstructure of the steel contained a significant quantity of free ferrite, and after tempering inclusions of carbides appeared in the ferrite grains. When 1% nickel was added, there was no free ferrite, the steel strength changed from 220 kG/sq mm to 375 kG/sq mm after normalization, and the steel hardness increased after tempering. The authors conclude that high quality and uniform features of large cast and wrought parts for power equipment may be achieved by introducing small quantities of nickel or by increasing the manganese content. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Institut metallurgii AN SSSR (Institute of Metallurgy)

SUBMITTED: 00

DATE ACQ: 27Feb64

ENCL: 00

SUB CODE: ML

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AT4013945

8/2659/63/010/000/0175/0178

AUTHOR: Trusov, L. P.; Dubrovskaya, Ye. F.; Marinenko, L. S.

TITLE: Improving the mechanical properties of perlitic high temperature steel

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochny'm splavam, v. 10, 1963, 175-178

TOPIC TAGS: steel, high temperature steel, steam turbine, nickel alloy steel, manganese alloy steel, perlitic steel

ABSTRACT: Perlitic steels, mainly alloyed with chromium and molybdenum, are widely used for manufacturing power equipment (steam turbines) in the SSSR. However, the mechanical properties and heat resistance of these brands of steel are relatively low. Unification of steam turbine parts leads to production of castings with 700 mm walls weighing 12 tons. Because of these dimensions, the usual heat treatment (normalization and tempering) can not ensure the necessary uniformity of properties in the entire casting. The necessary cooling rate for normalization therefore reaches 800 C per hour, which may be lowered somewhat for steel with a high content of alloying elements. This would require modification of the available equipment for heat treatment. The authors therefore studied the effect of Ni and Mn on the critical cooling rate for castings of

Card 1/2

TRUSOV, L.P., kand.tekhn.nauk; MARINENKO, L.S., inzh.

Type 15Kh1MLF steel for steam pipelines with a working temperature
of 565-585 . [Trudy] TSNIITMASH 105:71-86 '62. (MIRA 15:8)
(Steel, Heat-resistant—Testing)

37862

S/123/62/000/009/002/017

A052/A101

181151
AUTHORS: Sheshenev, M. F., Marinenko, L. S.

TITLE: Investigation of toughness of 12% chromium heat-resisting steel

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1962, 19-20, abstract 9A119 (V sb. "Issled. novykh zharoprochn. splavov dlya energetiki". Moscow, Mashgiz, 1961, 151-163)

TEXT: The results are presented of the investigation of toughness of 3H 756 (EI756) (12% Cr) steel samples with a different C content (0.05 - 0.27%) in a forged and cast state. The investigation was carried out for selecting material suitable for large seamless forged steam turbine rotors. The toughness of cast metal is very low and that of well-forged metal is high, independently of the C content. The decisive factor determining the toughness level is the size of ferrite grain (crushing leads to an increase of a_k). It is recommended to add modifiers (Al-Ba-Ca addition alloy) when casting steel, increasing considerably a_k of the cast metal.

[Abstracter's note: Complete translation]

Card 1/1

36818

S/137/62/000/004/121/201

A060/A101

18.1151
AUTHORS: Sheshenev, M. F., Marinenko, L. S.

TITLE: Toughness study of heat-resistant 12% chrome steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 54-55, abstract
41323 (V sb. "Issled. novykh zharoprochn. splavov dlya energetiki",
Moscow, Mashgiz, 1961, 151-163)

TEXT: The high level of a_k in 12% Cr-steel and semi-ferritic steel should be ensured already during the process of forging by a better treatment of the metal structure. In the production of castings and large forgings from steel of this class it is expedient to add graphitic elements (modifiers), especially alumino-barium-calcite alloy, to the metal, thus raising the a_k of the cast metal considerably.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 1/1

MARINENKO, L. S.

PAGE 1 BOOK EXPLANATION 307/3559

Abstrakty nauki SSSR. Institut metallurgii. Nauchnyy sovet po problemam zharko-
prochnosti sployny
Izvestiya po zharkoprochnosti sployny, t. 5 (Investigations of Heat-Resistant
Alloys, Vol. 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted.
2,000 copies printed.
Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.P. Kuz'min; Editorial
Board: I.P. Bardin, Academician, G.V. Kur'yakov, Academician, R.V. Aseyev,
Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Odintsov,
I.M. Pavlov, and I.P. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers
in metallurgy, and may also be of interest to students of advanced courses
in metallurgy.

CONTENTS: This book, consisting of a number of papers, deals with the proper-
ties of heat-resistant alloys and steels. Each of the papers is devoted to
the study of the factors which affect the properties and behavior of metals.
The effects of various elements such as Cr, Ni, Mo, and W on the heat-resistant
properties of various alloys are studied. Deformation and workability
of certain metals as related to the thermal conditions are the object of
another study described. The problems of hydrogen embrittlement, diffusion
and the deposition of ceramic coatings on metal surfaces by means of
electrophoresis are examined. One paper describes the apparatus and methods
used for growing monocrystals of metals. Poron-base steels are critically
examined and evaluated. Results are given of studies of intermetallic bonds
and the behavior of steels in metal. Tests of turbine and compressor blades are
described. No personalities are mentioned. References accompany most
of the articles.

Baritskiy, Y.G., and E.V. Popov. Study of Certain Problems of the Tempera- ture Dependence of the Elasticity of Steel From the Viewpoint of the Disloca- tion Theory	150
Grunin, P.L., L.V. Pavlov, A.M. Kuz'min (Deceased), and G.B. Fedorov Self-Diffusion in Chromium and Molybdenum	155
Prakhtionovskiy, G.P., M.P. Shchegolev, R.S. Kaplan, M.I. Butko, and L.G. Kharitonov. Investigation of the Properties of Ti-795 Steel	160
Platonovskiy, G.P., P.I. Pashukhin, and M.I. Solomonov. Cast Austenitic Steels for Service at Temperatures of 650-700°C	166
Pravdin, K.Z., M.A. Platonov, A.V. Pribludnyy, A.I. Kholodov, S.A. Iokhishchik, A.S. Lobanov, D.I. Borzhenkov, V.A. Tsvetkov, and M.A. Dmitriyev. Heat- Resistant Alloy for Automotive and Stationary Gas Turbines	173
Mitid, B.S. The Effect of Elements of Groups IV to VIII of the Periodic Table on the Properties of Phase III	179
Kuchinskii, B.I. The Effect of Hardness and Grain Size on the Thermal Fatigue of Heat-Resistant Steel	187
Portny, K.I., and G.V. Sazonov. Study of Boride-Base Materials	192
Arkhutov, P.M. Study of Phase Composition of the Diffusion Layer	199
Aseyev, B.A. On the Theory of Recovery and Complex Alloying of Steels	203
Rekhandzi, T.A., L.G. Gilyarovich, L.G. Rikhs, G.P. Kochneva, M.V. Antipov, I.V. Gulyashin, and A.G. Ioffe. Castability of Heat-Resisting Alloys	210
Kozlov, B.I., and A.M. Sazonov. Metallurgical Problems in Electroslag Welding of Heat-Resisting Austenitic Steels and Nickel-Chromium-Base Alloys	220
Faton B.Ye., B.I. Kozlov, and Yu.V. Lashin. Improvement of Quality and Worka- bility of Alloyed Steels and Alloys by Means of Electroslag Remelting in Water-Cooled Metal Molds	228
Kubinskii, B.E. The Effect of Small Amounts of Addition Agents on the Properties of Nickel-Base Alloys	234
Chibrikov, D.N., and A.M. Grin'ko. The Formation and Dissociation of Niobium Irides	240
Pavlov, I.M. Forming of Hard-to-Form Alloys	245
Kostegoyev, M.V., and A.M. Denil'chenko. Specific Deformation Work [per Unit of Volume] of Certain Alloys	255
Konlov, A.I., and A.M. Sazonov. Mechanical Properties of Deformed Chromium	260
Korneev, N.I., I.G. Shurev, S.B. Pavlov, and Ye.I. Ranzhayev. Thermo- mechanical Regimes of Forming. High-Temperature Polycrystalline and Thermo- Base Alloys	269

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Country : Rumania
 Category : Chemical Technology. Chemical Products and Their
 Applications--Leather. Fur. Gelatin. Tanning*
 Abs. Jour : Referat Zhur--Khim., No 11, 1959, 41119
 Author : Marincus, N.
 Institut. : Not given
 Title : The Technology of the Processing of Hog Hides

Orig. Pub. : Rev Ind Aliment Prod animale, No 4, 27-28 (1958)

Abstract : The author discusses the technology of hog hide processing used in a new shop of the Bucharest slaughter house. The replacement of the working tables [sic] of the hand carts with arched platforms is recommended; the recommended change will reduce the processing time per hide from 270 to 246 sec. For the improvement of working conditions the author recommends the removal of the centrifuge used for the steam purification of the various wastes from the work area and the establishment of special collection baskets for the collection and storage of wastes.

Card: 1/1

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H-311

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